Seeed Technology reTerminal with Raspberry Pi Compute Module User Manual

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Getting Started with reTerminal

Introducing reTerminal, a new member of our reThings family. This future-ready Human-Machine Interface (HMI) device can easily and efficiently work with IoT and cloud systems to unlock endless scenarios at the edge.

reTerminal is powered by a Raspberry Pi Compute Module 4 (CM4) which is a Quad-Core Cortex-A72 CPU running at 1.5GHz and a 5-inch IPS capacitive multitouch screen with a resolution of 1280 x 720. It has sufficient amount of RAM (4GB) to perform multitasking and also has sufficient amount of eMMC storage (32GB) to install an operating system, enabling fast boot up times and smooth overall experience. It has wireless connectivity with dual-band 2.4GHz/5GHz Wi-Fi and Bluetooth.

reTerminal consists of a high-speed expansion interface and rich I/O for more expandability. This device has security features such as a cryptographic coprocessor with secure hardware-based key storage. It also has built-in modules such as an accelerometer, light sensor and an RTC (Real-Time Clock). reTerminal has a Gigabit Ethernet Port for faster network connections and also has dual USB 2.0 Type-A ports. The 40-pin Raspberry Pi compatible header on the reTerminal opens it for a wide range of IoT applications.

reTerminal is shipped with Raspberry Pi OS out-of-the-box. So, all you have to do is connect it to power and start building your IoT, HMI and Edge AI applications right away

Features

- Integrated modular design with high stability and expandability
- Powered by Raspberry Pi Computer Module 4 with 4GB RAM & 32GB eMMC
- 5-Inch IPS capacitive multi-touch screen at 1280 x 720 and 293 PPI
- Wireless connectivity with dual-band 2.4GHz/5GHz Wi-Fi and Bluetooth
- High-speed expansion interface and rich I/O for more expandability
- Cryptographic co-processor with secure hardware-based key storage
- Built-in modules such as accelerometer, light sensor and RTC
- Gigabit Ethernet Port and Dual USB 2.0 Type-A ports
- 40-Pin Raspberry Pi compatible header for IoT applications

Hardware Overview

Quick Start with reTerminal

If you want to get started with the reTerminal in the most fastest and easiest way, you can follow the guide below.

Hardware Required

You need to prepare the following hardware before getting started with reTerminal reTerminal

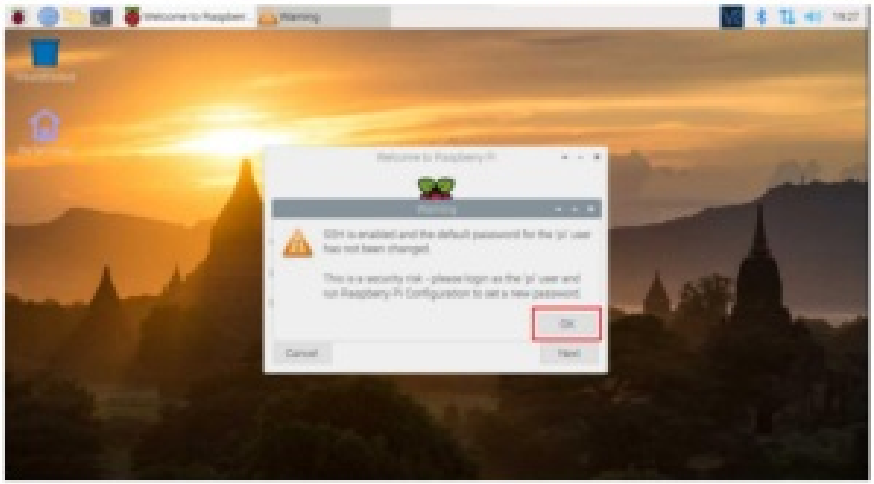
Ethernet cable or Wi-Fi connection

- Power adapter (5V/4A)
- USB Type-C cable

Software Required-Log in to Raspberry Pi OS

reTerminal comes with Raspberry Pi OS pre-installed out-of-the-box. So we can turn on the reTerminal and log in to Raspberry Pi OS straight away!

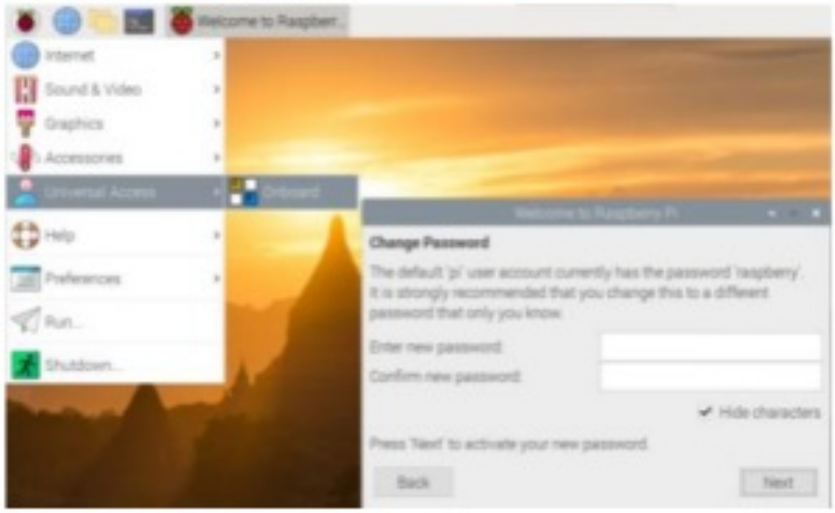
1. Connect one end of a USB Type-C cable to the reTerminal and the other end to a power adapter (5V/4A)
2. Once the Raspberry Pi OS is booted up, press OK for the Warning window



3. In the Welcome to Raspberry Pi window, press Next to get started with the initial set up

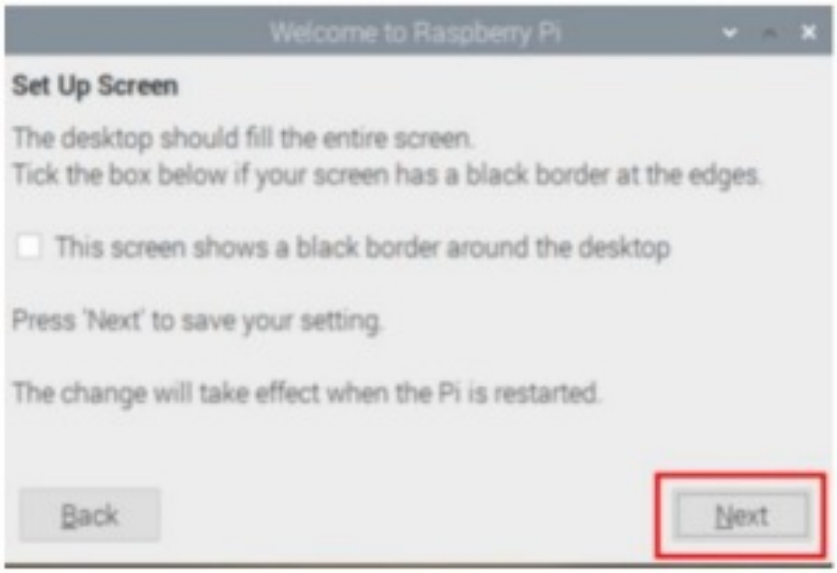
4. Choose your country, language, time zone and press Next

5. To change the password, first click on Raspberry Pi icon, navigate to Universal Access > Onboard to open the on-screen keyboard



6. Enter your desired password and click Next

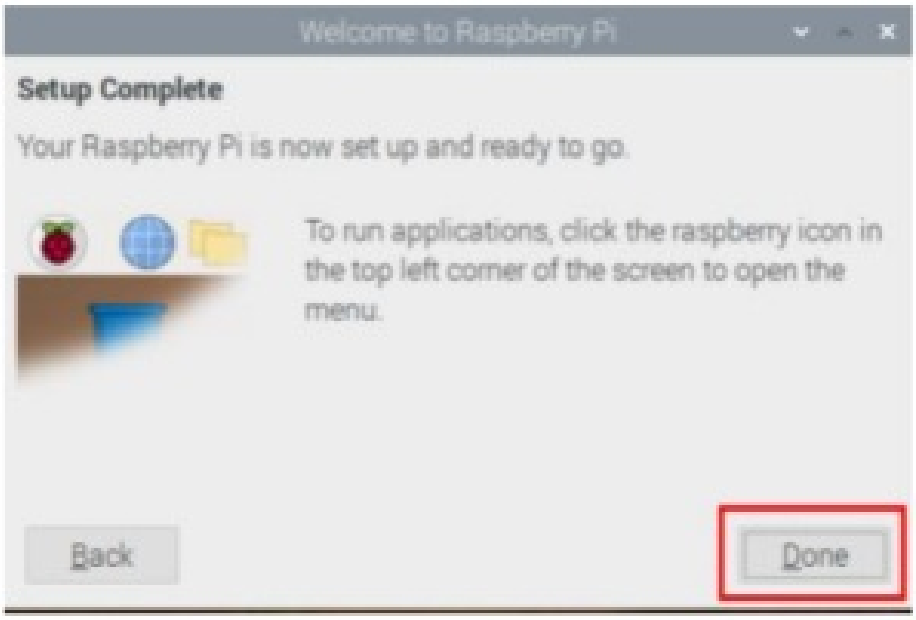
7. Click Next for the following



8. If you want to connect to a WiFi network, you can choose a network, connect to it and press Next. However, if you want to set it later, you can press Skip

9. This step is very important. You should make sure to press Skip to skip updating the software.

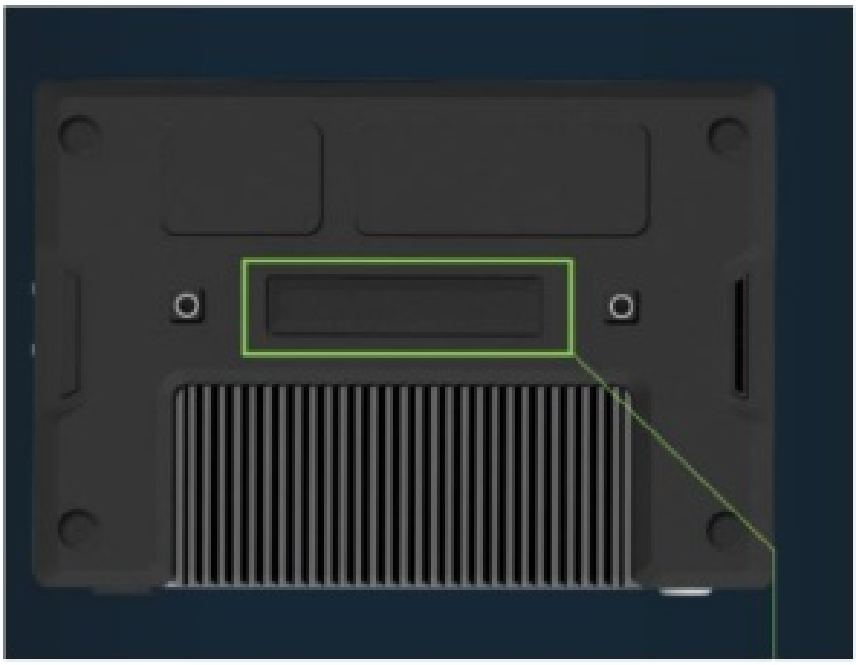
10. Finally press Done to finish the set up



Note: The button on the top left corner can be used to turn on the reTerminal after shutting down using software

Tip: If you want to experience the Raspberry Pi OS on a bigger screen, you can connect a display to the micro-HDMI port of the reTerminal and also connect a keyboard and a mouse to the USB ports of the reTermina

Tip: the following 2 interfaces are reserved.



Warming

The users manual or instruction manual shall include the following statement in a prominent location in the text of the manual:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off

and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Documents / Resources

	Seeed Technology reTerminal with Raspberry Pi Compute Module [pdf] User Manual RETERMINAL, Z4T-RETERMINAL, Z4TRETERMINAL, reTerminal with Raspberry Pi Compute Module, Raspberry Pi Compute Module, Pi Compute Module, Compute Module